

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 20734 4/25/2001]

[Docket No. 2001-NM-83-AD; Amendment 39-12191; AD 2001-08-13]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Model G-1159, G-1159A, G-1159B, G-IV, and G-V Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Gulfstream Model G-1159, G-1159A, G-1159B, G-IV, and G-V series airplanes. This action requires an inspection to determine if certain door control valves of the landing gear are installed, and modification of the valve, if necessary. This action is necessary to prevent loss of hydraulic system fluid due to failure of the door control valve of the landing gear, which could require the flight crew to use alternate gear extension procedures (landing gear blow down) for landing of all models. This action is intended to address the identified unsafe condition.

DATES: Effective May 10, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 10, 2001.

Comments for inclusion in the Rules Docket must be received on or before June 25, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2001-NM-83-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2001-NM-83-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Gulfstream Aerospace Corporation, P.O. Box 2206, M/S D-10, Savannah, Georgia 31402-9980. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Frank Mokry, Aerospace Engineer, Systems and Flight Test Branch, ACE-116A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6066; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION: The FAA has received reports indicating that in-flight failures of a certain door control valve of the landing gear (Gulfstream part number (P/N) 1159SCH231-33 with Eaton/Sterer P/N 65940-1) have occurred on Gulfstream Model G-IV and G-V

series airplanes. Investigation has revealed that the spool and sleeve assembly were ejected from the valve body, which resulted in complete loss of system hydraulic fluid. The investigation also revealed that the cause of the ejection was pressure buildup in the cavity of the body behind the spool and sleeve assembly. Although that control valve has been incorporated into the Gulfstream fleet of airplanes since the certification of the G-II model, it has undergone various design and dash number changes over the years. The control valve is used for extension and retraction operations for the nose landing gear and the left and right main landing gear.

Such failure of the door control valves of the landing gear, if not corrected, could result in complete loss of the combined hydraulic system fluid on Models G-1159, G-1159A, G-1159B, and G-IV series airplanes, and loss of fluid in the left hydraulic system in Model G-V series airplanes. Loss of the hydraulic system fluid requires the flight crew to use the airplane alternate gear extension procedures (landing gear blow down) for landing on all models.

Similar Condition on Other Models

Door control valves of the landing gear having P/N 1159SCH231-33 with Eaton/Sterer P/N 65940-1 that are installed on Gulfstream Model G-IV and G-V series airplanes may also be installed on Gulfstream Model G-1159, G-1159A, and G-1159B series airplanes. Therefore, all of these models may be subject to the same unsafe condition.

Explanation of Relevant Service Information

The FAA has reviewed and approved Gulfstream G-II Alert Customer Bulletin (ACB) No. 27 (for Model G-1159 and G-1159A series airplanes), G-III ACB No. 13 (for Model G-1159B series airplanes), G-IV ACB No. 27 (for Model G-IV), and G-V ACB No. 12 (for Model G-V series airplanes); all dated March 20, 2001. These ACB's describe procedures for performing a general visual inspection to determine if any door control valves of the landing gear having part number P/N 1159SCH231-33 with Eaton/Sterer P/N 65940-1, -1 Rev. A, or -1 Rev. B, are installed that contain certain serial numbers. The ACB's also describe procedures for modifying the door control valves by installing a new improved set screw with a pressure relief hole in it, filling with Dow Corning RTV 732 sealant, and labeling the valve as P/N 65940-1 Rev. C. Accomplishment of the actions specified in the ACB's is intended to adequately address the identified unsafe condition.

Additional Source of Service Information

The Gulfstream ACB's also reference Eaton Aerospace Sterer Engineering Service Bulletin 65940-27-01, dated March 1, 2001, as an additional source of service information.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to prevent loss of hydraulic system fluid due to failure of the door control valve of the landing gear, which could require the flight crew to use alternate gear extension procedures (landing gear blow down) for landing of all models. This AD requires accomplishment of the actions specified in the ACB's described previously, except as discussed below.

Difference Between AD and the ACB's

Operator's should note that the ACB's do not provide procedures to perform a visual inspection to determine if the specified Gulfstream and Eaton/Sterer valve P/N's are installed. Therefore, this AD provides those procedures in order to clarify that the inspection for certain serial numbers of the valves, and modification of the control valves, need only be done on airplane models having certain Gulfstream and Eaton/Sterer valve P/N's. Additionally, we have clarified that the requirements of this AD are unnecessary for airplane models that may have previously accomplished the replacement of the landing gear control valves with valves having P/N 65940-1 Rev. C.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2001-NM-83-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-08-13 GULFSTREAM AEROSPACE CORPORATION : Amendment 39-12191. Docket 2001-NM-83-AD.

Applicability: Model G-1159, G-1159A, G-1159B, G-IV, and G-V series airplanes, as specified in the Gulfstream Alert Customer Bulletins listed in the following table; certificated in any category:

Table - Gulfstream Airplane Models and Alert Customer Bulletin's (ACB)

Model	ACB	Dated
G-1159 and G-1159A (G-II/IIB) series airplanes	No. 27	March 20, 2001
G-1159B (G-III) series airplanes	No. 13	March 20, 2001
G-IV series airplanes	No. 27	March 20, 2001
G-V series airplanes	No. 12	March 20, 2001

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of hydraulic system fluid due to failure of the door control valve of the landing gear, which could require the flight crew to use alternate gear extension procedures (landing gear blow down) for landing of all models; accomplish the following:

Inspection and Replacement of Valves

(a) Within 15 landings or 30 days after the effective date of this AD, whichever occurs later: Perform a general visual inspection to determine if any landing gear door control valve having Gulfstream part number (P/N) 1159SCH231-33 with Eaton/Sterer P/N 65940-1, -1 Rev. A, or -1 Rev. B, is installed.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of

access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(1) If no valve has those P/N's, no further action is required by this paragraph.

(2) If all valves found have P/N 1159SCH231-33 with Eaton/Sterer P/N 65940-1, Rev. C, no further action is required by this paragraph.

(b) If any valve has a door control valve of the landing gear having Gulfstream P/N 1159SCH231-33 with Eaton/Sterer P/N 65940-1 and a serial number as specified in paragraph (b)(1) or (b)(2) of this AD: Replace the set screw with a new set screw, fill with Dow Corning RTV 732 sealant, and label the valve as P/N 65940-1 Rev. C; in accordance with Gulfstream G-II ACB No. 27 (for Model G-1159 and G-1159A series airplanes), G-III ACB No. 13 (for Model G-1159B series airplanes), G-IV ACB No. 27 (for Model G-IV series airplanes), and G-V ACB No.12 (for Model G-V series airplanes); all dated March 20, 2001, as applicable; at the times specified in paragraph (b)(1) or (b)(2), as applicable.

(1) For valves having serial number 1900 or higher: Within 5 landings or 15 days after the effective date of this AD, whichever occurs later.

(2) For valves having a serial number less than 1900: Within 50 landings or 90 days after the effective date of this AD, whichever occurs later.

NOTE 3: The Gulfstream ACB's specified in paragraphs (a) and (b) of this AD reference Eaton Aerospace Sterer Engineering Service Bulletin 65940-27-01, dated March 1, 2001, as an additional source of service information.

(c) As of the effective date of this AD, no person shall install on any airplane a door control valve of the landing gear, Gulfstream P/N 1159SCH231-33 with Eaton/Sterer P/N 65940-1, unless that valve has been modified in accordance with paragraph (b) of this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) With the exception of the general visual inspection required by paragraph (a) of this AD, the actions shall be done in accordance with Gulfstream GII Alert Customer Bulletin No. 27, dated March 20, 2001; Gulfstream G-III Alert Customer Bulletin No. 13, dated March 20, 2001; Gulfstream G-IV Alert Customer Bulletin No. 27, dated March 20, 2001; and Gulfstream G-V Alert Customer Bulletin No.12, dated March 20, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Gulfstream Aerospace Corporation, P.O. Box 2206, M/S D-10, Savannah, Georgia 31402-9980. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601

Lind Avenue, SW., Renton, Washington; at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on May 10, 2001.

FOR FURTHER INFORMATION CONTACT: Frank Mokry, Aerospace Engineer, Systems and Flight Test Branch, ACE-116A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6066; fax (770) 703-6097.

Issued in Renton, Washington, on April 16, 2001.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.